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**PATENT ABSTRACTS OF JAPAN**

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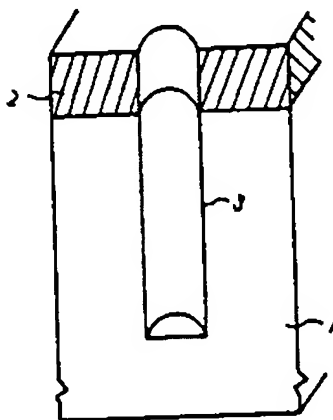
**(54) ETCHING METHOD**

(57) Abstract:

**PURPOSE:** To improve the accuracy of etching for fine working by using the mixed gas of an isotropic etching gas being represented by SF<sub>6</sub> and having large reactivity and an anisotropic etching gas containing heavy ions easy to be dissociated to a symmetrical shape.

**CONSTITUTION:** A mixed gas mainly comprising at least one kind of a gas selected from a group composed of SF<sub>6</sub>, CF<sub>4</sub>, NF<sub>3</sub>, XeF<sub>2</sub> and F<sub>2</sub> as an isotropic etching gas and at least one kind of a gas (where X represents at least one kind selected from a group consisting of Cl, Br, I and H) selected from a group made up of (CXF<sub>2</sub>)<sub>2</sub>, (CX<sub>2</sub>F)<sub>2</sub> and (CX<sub>3</sub>)<sub>2</sub> is employed, and plasma etching is conducted.

Accordingly, since etching can be performed by extremely low high frequency power, a resist can be used as an etching mask, and a vertical etching hole 3 can be formed when an Si substrate 1 is etched, employing the resist 2 as the mask.



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